

In the Claims:

- 1     1.     (Previously presented) A diamond tool fabricated with a  
2           single crystal diamond artificially synthesized under high  
3           pressure in a temperature difference method, characterized  
4           in that said diamond has a crystal containing an impurity  
5           in an amount of at most 3 ppm and the tool has a blade with  
6           an end having a plane orientation being a (110) plane.
  
- 1     2.     (Original) The diamond tool according to claim 1, wherein  
2           said crystal contains said impurity in an amount of at most  
3           0.1 ppm.
  
- 1     3.     (Original) The diamond tool according to claim 1, being one  
2           of an ultra high precision cutting tool, a microtome knife,  
3           a diamond knife, a diamond stylus, a line drawing die, and  
4           a dresser.
  
- 1     4.     (Currently amended) The diamond tool according to claim 1,  
2           wherein a titanium containing, activated brazing material  
3           ~~[[+22+]]~~ is employed to attach said diamond to a main body  
4           of the tool.
  
- 1     5.     (Previously presented) A diamond tool fabricated with a  
2           single crystal diamond artificially synthesized under high  
3           pressure in a temperature difference method, characterized  
4           in that said diamond has a crystal containing nitrogen in

5 an amount of at most 3 ppm and the tool has a blade with an  
6 end having a plane orientation being a (110) plane and said  
7 crystal also contains nickel.

1 6. (Original) The diamond tool according to claim 5, wherein  
2 said nickel is contained in an amount of at least 0.01 ppm  
3 and at most 10 ppm.

1 7. (Currently amended) The diamond tool according to claim 5,  
2 wherein a titanium containing, activated brazing material  
3 ~~[[+22+]]~~ is employed to attach said diamond to a main body  
4 of the tool.

1 8. (Previously presented) A diamond tool fabricated with a  
2 single crystal diamond artificially synthesized under high  
3 pressure in a temperature difference method, characterized  
4 in that said diamond has a crystal containing nitrogen in  
5 an amount of at most 3 ppm and the tool has a blade with an  
6 end having a plane orientation being a (110) plane and said  
7 crystal also contains boron and nickel.

1 9. (Original) The diamond tool according to claim 8, wherein  
2 said boron is contained in an amount of at least 0.01 ppm  
3 and at most 300 ppm.

1 10. (Original) The diamond tool according to claim 8, wherein  
2 said nickel is contained in an amount of at least 0.01 ppm  
3 and at most 10 ppm.

- 1     **11.**   (Currently amended) The diamond tool according to claim 8,  
2            wherein a titanium containing, activated brazing material  
3            [[~~(22)~~]] is employed to attach said diamond to a main body  
4            of the tool.
- 1     **12.**   (Original) A synthetic single crystal diamond synthesized  
2            under ultra high pressure at high temperature in a  
3            temperature difference method, characterized by having a  
4            crystal containing nickel as a substitutional atom.
- 1     **13.**   (Original) The synthetic single crystal diamond according  
2            to claim 12, wherein said nickel is contained in an amount  
3            of at least 0.01 ppm and at most 10 ppm.
- 1     **14.**   (Original) The synthetic single crystal diamond according  
2            to claim 12, containing nitrogen in an amount of at least  
3            0.01 ppm and at most 3 ppm.
- 1     **15.**   (Original) The synthetic single crystal diamond according  
2            to claim 12, used for a tool.
- 1     **16.**   (Currently amended) The synthetic single crystal diamond  
2            according to claim 15, wherein a titanium containing,  
3            activated brazing material [[~~(22)~~]] is employed to attach  
4            the synthetic single crystal diamond to an end [[~~(23)~~]] of  
5            said tool.

- 1     **17.**   (Original) The synthetic single crystal diamond according  
2           to claim 12, used for jewelry.
- 1     **18.**   (Original) A diamond tool comprising the synthetic single  
2           crystal diamond of claim 12.
- 1     **19.**   (Original) Diamond jewelry comprising the synthetic single  
2           crystal diamond of claim 12.
- 1     **20.**   (Original) A method of synthesizing a single crystal  
2           diamond under ultra high pressure at high temperature in a  
3           temperature difference method, characterized by employing  
4           a solvent formed of at least one of iron and cobalt, at  
5           least 36% by weight of nickel, at least 1% by weight and at  
6           most 2% by weight of titanium, and at least 3% by weight  
7           and at most 5.5% by weight of graphite.
- 1     **21.**   (Currently amended) The method according to claim 20,  
2           wherein a seed face of a seed crystal ~~[[+13+]]~~ is a (100)  
3           plane of a crystal of diamond.
- 1     **22.**   (Original) The method according to claim 20, wherein said  
2           single crystal diamond is synthesized at  $1380 \pm 25^{\circ}\text{C}$ .
- 1     **23.**   (Original) The method according to claim 20, wherein said  
2           single crystal diamond is synthesized at a rate of at least  
3           3.9 mg/hr and at most 4.7 mg/hr.

- 1     **24.**   (Original) A synthetic single crystal diamond synthesized  
2           under ultra high pressure at high temperature in a  
3           temperature difference method, characterized by having a  
4           crystal containing boron and nickel as substitutional  
5           atoms.
- 1     **25.**   (Original) The synthetic single crystal diamond according  
2           to claim 24, wherein said boron is contained in an amount  
3           of at least 1 ppm and at most 300 ppm.
- 1     **26.**   (Original) The synthetic single crystal diamond according  
2           to claim 24, wherein said nickel is contained in an amount  
3           of at least 0.01 ppm and at most 10 ppm.
- 1     **27.**   (Original) The synthetic single crystal diamond according  
2           to claim 24, containing nitrogen in an amount of at most 3  
3           ppm.
- 1     **28.**   (Original) The synthetic single crystal diamond according  
2           to claim 24, used for a tool.
- 1     **29.**   (Currently amended) The synthetic single crystal diamond  
2           according to claim 28, wherein a titanium containing,  
3           activated brazing material ~~[[+22+]]~~ is employed to attach  
4           the synthetic single crystal diamond to an end ~~[[+23+]]~~ of  
5           said tool.

- 1     **30.**   (Original) The synthetic single crystal diamond according  
2           to claim 24, used for jewelry.
- 1     **31.**   (Original) A diamond tool comprising the synthetic single  
2           crystal diamond of claim 24.
- 1     **32.**   (Original) Diamond jewelry comprising the synthetic single  
2           crystal diamond of claim 24.
- 1     **33.**   (Original) A method of synthesizing a single crystal  
2           diamond under ultra high pressure at high temperature in a  
3           temperature difference method, characterized by employing  
4           a solvent formed of at least one of iron and cobalt, at  
5           least 36% by weight of nickel, at least 1% by weight and at  
6           most 2% by weight of titanium, at least 0.1% by weight and  
7           at most 0.2% by weight of boron and at least 3% by weight  
8           and at most 5.5% by weight of graphite.
- 1     **34.**   (Currently amended) The method according to claim 33,  
2           wherein a seed face of a seed crystal ~~[[+13+]]~~ is a (100)  
3           plane of a crystal of diamond.
- 1     **35.**   (Original) The method according to claim 33, wherein said  
2           single crystal diamond is synthesized at  $1350 \pm 30^{\circ}\text{C}$ .
- 1     **36.**   (Original) The method according to claim 33, wherein said  
2           single crystal diamond is synthesized at a rate of at least  
3           3.1 mg/hr and at most 3.8 mg/hr.